This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-3. (Cancelled)

4. (Currently Amended) A method for producing a composition comprising S-nitrosohemoglobin, said method comprising adding free NO to a composition comprising oxyhemoglobin under conditions sufficient to maintain the R structure of hemoglobin and preserve redox chemistry in hemoglobin and wherein the free NO is added in an amount sufficient to produce S-nitrosohemoglobin.

5. (Currently Amended) A method of producing a composition comprising intraerythrocytic S-nitrosohemoglobin, said method comprising adding free NO to a composition comprising oxygenated erythrocytes under conditions sufficient to maintain the R structure of hemoglobin and preserve redox chemistry in hemoglobin and wherein the free NO is added in an amount sufficient to produce S-nitrosohemoglobin.

6. (Previously Presented) A method for producing a composition comprising intraerythrocytic NO at greater than about 50nM, said method comprising adding sufficient free NO to a composition comprising oxygenated to yield an intraerythrocytic NO concentration of greater than about 50nM.

7-29 (Cancelled)

30. (Previously Presented) The method of claim 4, wherein the conditions sufficient to maintain the R structure of hemoglobin comprise a phosphate concentration that is less than 100 mM.

31. (Previously Presented) The method of claim 30, wherein the phosphate concentration is about 10 mM.

32 (Previously Presented) The method of claim 4, wherein the amount of free NO is about 100 nM to about 1 mM and the ratio of free NO to heme is about 1:4000 to about 1:100.

33. (Previously Presented) The method of claim 5, wherein the conditions sufficient to maintain the R structure of hemoglobin comprise a phosphate concentration that is less than 100 mM.

34. (Previously Presented) The method of claim 33, wherein the phosphate concentration is about 10 mM.

35 (Previously Presented) The method of claim 5, wherein the amount of free NO is about 100 nM to about 1 mM and the ratio of free NO to heme is about 1:4000 to about 1:100.